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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,288	12/17/1999	HANS PETER OSTERGAARD	910_001	9985

28264 7590 07/31/2003

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EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark OfficeAddress: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER NUMBER
	12

DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 1 Aug 2002 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire three (3) month(s), three days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-4, 6-11, 13, 15, 16 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☒ Claims 5; 12; 14 have been cancelled.
3. ☒ Claims 15, 13 are allowed.
4. ☒ Claims 1-4; 7, 8, 6; 9-11; 16 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are: ☐ acceptable;
☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☒ The proposed drawing correction, filed 10 Sept 2001, has been ☒ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

SN 466288

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The substitute specification filed 20 March 2002 has been considered, found acceptable and has replaced the original specification. The following objections pertain to the substitute specification:

The disclosure is objected to because of the following informalities: Page 6, line 3, note that "11-H" should correctly be --II-II--; line 6, note that "TV-N" should correctly be --IV-IV--.

Appropriate correction is required.

The use of the trademark XINGER (page 8, last line) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The amendment filed 1 August 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In amended fig. 1, applicant deleted reference labels (8, 9) directed to curved surface portions of the substrate. However, in deleting reference (8, 9), applicant also deleted the curve surface portions associated with the substrate. Since these curved surface portions were a part of the originally disclosed invention, such a physical alteration is objected to as "new matter" unless applicant can explain otherwise.

Applicant is required to cancel the new matter in the reply to this Office Action.

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The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The “third conductor” as recited in claim 7 needs description in the specification.

Claims 3, 4; 7, 8, 6; 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, note that it is unclear how “a second conductor line” relates to the earlier recited “at least one conductor line” (e.e. a part thereof, separate therefrom, etc).

In claims 3, 4, note that “said first conductor line” lacks strict antecedent basis.

In claims 3, 7, note that it is unclear whether the “second electrical path” properly traverses from “one end” to the “opposed end” of the crossover. Note from fig. 5 that one conductive path (e.g. 32) traverses from one end to the opposed end of the crossover, then the other (orthogonal) conductive path (e.g. 33) can not traverse between the same “one end” to the same “opposed end,” but traverses between different ends.

In claims 4, 8, note that reference to “said (first and second) termination contacts” remains unclear as to which termination contacts are intended (i.e. first and/or second; input and/or output, etc).

In claims 6, 7, 8, note that it is unclear which one (s), of the “at least one second conductor line” is intended by the respectively recited “said second conductor line(s)”.

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In claim 7, fifth paragraph, note that "said second conductor at least one line..." is vague in meaning. Moreover, it is unclear what characterizes "said dielectric layer laterally spaced from said second conductor line".

In claim 16, note that the claim improperly depends from canceled claim"14".

The following claims have been found objectionable for reasons set forth below:

In claim 1, the preamble should be rewritten to clearly indicate that both "a conductor line" and "another conductor line" are "printed on the integrated circuit" to give clear antecedent basis for the subsequently recited "conductor line printed on the integrated circuit".

In claim 2, line 4, note that "at least one" should precede "conductor line" for consistency of description.

In claim 15, note that --at least one-- should be associated with subsequent recitations of "first and second conductors".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4; 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwami in view of Whybrew et al (both of record).

Iwami (Fig. 1b) discloses a discrete crossover component which can be "dropped into" the "integrated circuit" (Fig. 1a) to operatively connect, yet isolate, printed circuit conductors (2A,

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2B; 6A, 6B). As is evident from Figs. 1b and 2, ^{the} discrete ~~the~~ crossover component comprises vertically stacked alternating ground, dielectric and signal layers. Note that there are two orthogonally oriented isolated signal layers for connection via termination contacts (5) with printed circuit conductor (2A, 2B; 6A, 6B), respectively. As is evident from Fig. 1b, conductive elements (9B) connect at the corners of the crossover component to the top and bottom ground layers. However, Iwami differs from the claimed invention in that it does not include a further grounding layer interposed between and isolating the orthogonally oriented interconnecting signal layers.

Whybrew et al provides an exemplary teaching of an orthogonal cross over (114,41) for connecting and isolating two orthogonally signal paths (10, 40). Moreover, note that a further ground plane layer (60) is disposed between and thus electrically and capacitively isolates the orthogonal crossovers (114,41). Also, note that at corners of the crossover vias (61-64) connect the top and bottom ground planes.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have modified the "drop-in" discrete crossover component of Iwami to have included an isolating ground plane disposed between the orthogonal crossover conductors. Such a modification would have been obvious since it would have imparted the improved isolation and shielding benefits provided by the Whybrew et al crossover (i.e. isolation of crossing signal paths) to the discrete crossover in Iwami, thereby suggesting the obviousness of such a modification.

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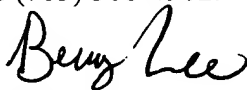
Applicant's arguments with respect to claims 1-4; 5, 6; 9-11; 12-14, 16 have been considered but are moot in view of the new ground(s) of rejection.

Claims 15, 13 are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308-4902.



BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817
B LEE/pj

07/28/03